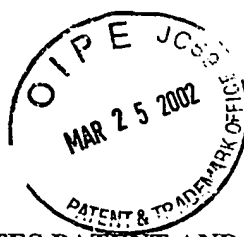


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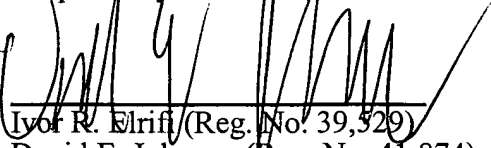
APPLICANT(S): Karen M. Lyons  
SERIAL NO.: 10/005,228  
FILING DATE: December 3, 2001  
FOR: Method and Composition for Modulating Bone Growth

Box IDS  
Commissioner for Patents  
Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

Applicants hereby make of record the documents listed below and on the attached modified Form PTO-1449 (submitted in duplicate) in the above-identified application, copies of which are submitted herewith. This Information Disclosure Statement is being filed before the mailing date of a first Office Action based on the merits in the above-identified case. Accordingly, no fee or certification is believed required. A copy of each of the references is enclosed unless otherwise indicated on the attached Form PTO-1449 (modified). Please charge any fees that may be due, or credit any overpayment of same, to Deposit Account No. 50-0311 Reference No. 22058-554.

Respectfully submitted,

  
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<b>Modified Form 1449/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)	<b>Application Number</b>	10/005,228
	<b>Filing Date</b>	December 3, 2001
	<b>First Named Inventor</b>	Lyons
	<b>Group Art Unit</b>	1636
	<b>Examiner Name</b>	Not Yet Assigned
	<b>Attorney Docket Number</b>	22058-554

U.S. PATENT DOCUMENTS							
Exam Initials	Cite No.	U.S. Patent Document No.	Issue Date	Name of Patentee(s) or Applicant(s)	Class	Sub Class	Filing Date If Appropriate
	A1	5,116,738	05/26/92	Wang, et al.			
	A2	5,688,678	11/18/97	Hewick, et al.			
	A3	6,287,816	09/11/01	Rosen, et al.			

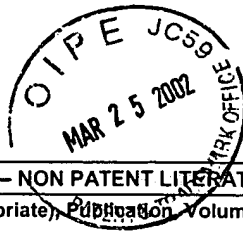
FOREIGN PATENT DOCUMENTS							
Exam Initials	Cite No.	Foreign Patent Document Office	Number	Name of Patentee(s) or Applicant(s)	Date of Publication	Translation Yes	No
	B1	WO	88/00205	Genetics Institute, Inc.	01/14/1988		
	B2	WO	89/10409	Genetics Institute, Inc.	11/02/1989		
	B3	WO	90/11366	Genetics Institute, Inc.	10/04/1990		
	B4	WO	99/53049	Abgenix, Inc.	10/21/1999		

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS		
Exam Initials	Cite No.	Name of Author, Title (when appropriate), Publication, Volume, Page(s), Date, Etc.
	C1	Brodeur, et al. (1987). "Mouse-Human Myeloma Partners for the Production of Heterohybridomas." <i>Monoclonal Antibody Production Techniques and Applications</i> : 51-63. (Marcel Dekker, Inc.).
	C2	Huse, et al. (1989). "Generation of a Large Combinatorial Library of the Immunoglobulin Repertoire in Phage Lambda." <i>Science</i> <b>246</b> : 1275-1281.
	C3	Lonberg, et al. (1994). "Antigen-specific human antibodies from mice comprising four distinct genetic modifications." <i>Nature</i> <b>368</b> : 856-859.
	C4	Shopes (1992). "A Genetically Engineered Human IgG Mutant with Enhanced Cytolytic Activity." <i>J. immunol.</i> <b>148</b> (9): 2918-2922.
	C5	Tutt, et al. (1991). "Trispecific F(ab') <sub>3</sub> Derivatives that Use Cooperative Signaling Via TCR/CD3 Complex and CD2 to Activate and Redirect Resting Cytotoxic T Cells." <i>J. immunol.</i> <b>147</b> : 60-69.
	C6	Thies, et al. (1992). "Recombinant Human Bone Morphogenetic Protein-2 Induces Osteoblastic Differentiation in W-20-17 Stromal Cells." <i>Endocrinol.</i> <b>130</b> : 1318-1324.
	C7	Engstrand, et al. (2000). "Transient Production of Bone Morphogenetic Protein 2 by Allogeneic Transplanted Transduced Cells Induces Bone Formation." <i>Hum. Gene Ther.</i> <b>11</b> : 205-211.
	C8	Bostrom, et al. (1993). "Immunolocalization and Expression of Bone Morphogenetic Proteins 2 and 4 in Fracture Healing." <i>J. Orthop. Res.</i> <b>13</b> : 357-367.
	C9	Wozney, et al. (1993). "Bone Morphogenetic Proteins." <i>Physiology and Pharmacology of Bone</i> . Pages 725-748. (Edited by Martins and Mundy).
	C10	Harland (1994). "The transforming growth factor $\beta$ family and induction of the vertebrate mesoderm: Bone morphogenetic proteins are ventral inducers." <i>Proc. Natl. Acad. Sci. USA</i> <b>91</b> : 10243-10246.
	C11	Hollnagel, et al. (1999). "Id Genes Are Direct Targets of Bone Morphogenetic Protein Induction in Embryonic Stem Cells." <i>J. Biol. Chem.</i> <b>274</b> : 19838-19845.
	C12	Katagiri, et al. (1994). "Bone Morphogenetic Protein-2 Converts the Differentiation Pathway of C2C12 Myoblasts into the Osteoblast Lineage." <i>J. Cell Biol.</i> <b>127</b> (6): 1755-1766.

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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS		
Exam Initials	Cite No.	Name of Author, Title (when appropriate), Publication, Volume, Page(s), Date, Etc.
	C13	Liu, et al. (1995). "Premature suture closure and ectopic cranial bone in mice expressing Msx2 transgenes in the developing skull." <i>Proc. Natl. Acad. Sci. USA</i> 92: 6137-6141.
	C14	Brummel, et al. (1994). "Characterization and Relationship of Dpp Receptors Encoded by the saxophone and thick veins Genes in Drosophila." <i>Cell</i> 78: 251-261.
	C15	Penton, et al. (1994). "Identification of Two Bone Morphogenetic Protein Type I Receptors in Drosophila and Evidence That BrkCell 78: 239-250.
	C16	Hoodless, et al. (1996). "MADR1, a MAD-Related Protein that Functions in BMP2 Signaling Pathways." <i>Cell</i> 85: 489-500.
	C17	Attisano, et al. (1993). "Identification of Human Activin and TGF type I Receptors That Form Heteromeric Kinase Complexes with Type II Receptors." <i>Cell</i> 75: 671-680.
	C18	Macias-Silva, et al. (1998). " Specific Activation of Smad1 signaling Pathways by the BMP7 Type I Receptor, ALK2." <i>J. Biol. Chem.</i> 273(40): 25628-25636.
	C19	GenBank Accession Number: NM_000020 (12/01/2000).
	C20	GenBank Accession Number: XM_042360 (10/16/2001).

\* a copy of this reference is not provided as it was previously cited by or submitted to the office in a prior application, Serial No. \_\_\_\_\_, filed \_\_\_\_\_, and relied upon for an earlier filing date under 35 U.S.C. §120 (continuation, continuation-in-part, and divisional applications).

Examiner Signature		Date Considered	
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered.

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